

WHAT IS CLAIMED IS:

1                   1.       A method of configuring a broadcast aperture for transferring data  
2 between a processor and a plurality of graphics devices, the method comprising:  
3                   receiving allocation data for a broadcast aperture in a physical address space;  
4                   configuring a bridge with a first set of configuration data, wherein the bridge  
5 is adapted to facilitate transferring data between a processor and a plurality of graphics  
6 devices;  
7                   configuring the bridge with a second set of configuration data, thereby  
8 activating the broadcast aperture.

1                   2.       The method of claim 1, wherein configuring a bridge with a first set of  
2 configuration data further comprises retrieving at least a portion of the first set of  
3 configuration data including a broadcast aperture size from a system configuration memory.

1                   3.       The method of claim 2, wherein the broadcast aperture size is set by a  
2 user via a BIOS configuration utility.

1                   4.       The method of claim 1, wherein configuring the bridge with a second  
2 set of configuration data comprises receiving at least a portion of the second set of  
3 configuration data from a graphics driver associated with the plurality of graphics devices.

1                   5.       The method of claim 1, wherein at least one of the plurality of graphics  
2 devices includes a plurality of graphics processing units.

1                   6.       The method of claim 1, wherein the processor executes a graphics  
2 driver adapted to communicate a set of rendering commands and rendering data to the  
3 plurality of graphics devices via the broadcast aperture.

1                   7.       The method of claim 6, wherein the set of rendering commands directs  
2 a first portion of the plurality of graphics devices to render a first portion of a frame and  
3 directs a second portion of the plurality of graphics devices to render a second portion of the  
4 frame.

1                   8.       The method of claim 6, wherein the set of rendering commands directs  
2 a first portion of the plurality of graphics devices to render a first frame and directs a second  
3 portion of the plurality of graphics devices to render a second frame.

1                   9.       The method of claim 6, wherein the set of rendering commands direct  
2 a first portion of the plurality of graphics devices to transfer rendered image data comprising  
3 at least a portion of a frame to one of the plurality of graphics devices connected with a  
4 display device.

1                   10.     The method of claim 9, wherein the first portion of the plurality of  
2 graphics devices is adapted to transfer rendered image data to the one of the plurality of  
3 graphics devices connected with a display device via a digital video connection.

1                   11.     The method of claim 9, wherein the first portion of the plurality of  
2 graphics devices is adapted to transfer rendered image data to the one of the plurality of  
3 graphics devices connected with a display device via a graphics bus using a blit operation.

1                   12.     The method of claim 11, wherein the rendered image data includes an  
2 anti-aliased version of at least a portion of a frame.

1                   13.     The method of claim 11, wherein the rendered image data is associated  
2 with a complex portion of a frame.

1                   14.     An apparatus for transferring data to a plurality of graphics devices,  
2 the apparatus comprising:  
3                   a graphics device interface adapted to communicate a set of data with each of  
4 the plurality of graphics devices; and  
5                   a graphics device broadcast unit responsive to the set of data received via a  
6 broadcast aperature, wherein in response to receiving the set of data via the broadcast  
7 aperature, the graphics device broadcast unit is adapted to communicate a copy of the set of  
8 data with each of the plurality of graphics devices.

1                   15.     The apparatus of claim 14, wherein the graphics device broadcast unit  
2 is adapted to receive the set of data from a processor via the broadcast aperature.

1                   16.     The apparatus of claim 14, further including a direct memory access  
2 transfer unit adapted to retrieve the set of data from a memory and to communicate the set of  
3 data to the graphics device broadcast unit via the broadcast aperature.

1                   17.     The apparatus of claim 14, wherein the graphics device broadcast unit  
2 includes a broadcast aperature base address register adapted to store a memory address  
3 associated with the broadcast aperature.

1                   18.     The apparatus of claim 17, further adapted to receive the memory  
2 address associated with the broadcast aperature from a bridge driver.

1                   19.     The apparatus of claim 14, wherein the graphics device broadcast unit  
2 includes a broadcast aperature size register adapted to store a size value associated with the  
3 broadcast aperature.

1                   20.     The apparatus of claim 19, further adapted to receive the size value  
2 associated with the broadcast aperature from a bridge driver, wherein the bridge driver is  
3 adapted to retrieve the size value associated with the broadcast aperature from a system  
4 configuration memory.

1                   21.     The apparatus of claim 14, wherein the graphics device broadcast unit  
2 includes a plurality of unicast aperature base address registers corresponding with the  
3 plurality of graphics devices, each unicast aperature base address register adapted to store a  
4 memory address associated with a unicast aperature of one of the plurality of graphics  
5 devices; and

6                   wherein the graphics device interface is adapted to communicate a copy of the  
7 set of data with the each of plurality of graphics devices via its associated unicast aperature.

1                   22.     The apparatus of claim 21, further adapted to receive the memory  
2 addresses associated with the unicast aperatures of the plurality of graphics devices from a  
3 graphics driver via a bridge driver.